FUNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

CAMERON INTERNATIONAL CORPORATION,	§	
	§	
Plaintiff,	§	
	§	CIVIL ACTION NO. 6:20-cv-00125
v.	§	
	§	**JURY TRIAL REQUESTED**
NITRO FLUIDS L.L.C.,	§	
	§	
Defendant.	§	

PLAINTIFF CAMERON INTERNATIONAL CORP.'S
OPENING CLAIM CONSTRUCTION BRIEF

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E	U.S. Patent Publication No. 2010/0300672 ("Childress")
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I. INTRODUCTION AND SUMMARY OF THE ARGUMENT

Nitro contends the Court needs to construe eight terms. Of the eight, Nitro contends one is indefinite, and proposes limiting constructions for the remaining seven. This includes simple terms like "fracturing operation" and "connection block." But there are no definitions in the patent nor any disavowals of claim scope that support Nitro's proposed limiting constructions for these terms. Nor is there any indication that a person of ordinary skill in the art, with the requisite experience and education, would not understand what a "fracturing operation" or a "connection block" is within the context of the claims. Nitro is instead improperly asking the Court to read limitations from disclosed embodiments into the claims. The Court should reject this request and instead apply the plain and ordinary meaning of these terms.

Nitro is also wrong that "a first connection block positioned at the well fracturing tree" is indefinite. Nitro does not contend that "connection block" or "fracturing tree" are indefinite; it separately proposes constructions for both. Instead, Nitro contends a person of ordinary skill in the art would not understand what it means to *position* a connection block at a fracturing tree. First, there is nothing difficult or even imprecise about this term. Moreover, as Dr. Gary Wooley explains,[1] a person of ordinary skill in the art would be familiar with positioning various components—like frac heads, blowout preventers, and fluid conduits—at fracturing trees. There is no basis to argue such a person would not understand with reasonable certainty what it means to position a connection block at a fracturing tree.

As to the terms "fluid conduit" and "rigid fluid pathway," Nitro proposes reading "adjustment joint" or "swivel joint" limitations into these terms. But Nitro is simply trying to read

[1] Dr. Wooley is a person of ordinary skill in the art (a "POSITA"). *See* Ex. A, ¶¶ 2–11.

embodiments into the claims to create a noninfringement position. These limitations appear nowhere in the asserted claims. And the same limitations Nitro is seeking to read into the asserted independent claims—adjustment joints and swivel joints—are added as limitations in various unasserted dependent claims, showing that the patentee knew how to use these as claim terms when the patentee chose to do so. There are also no express or implied definitions in either specification that support Nitro's constructions. The Court should therefore construe these terms to have their full scopes in accord with their plain and ordinary meanings.

For "fracturing manifold" and 'fracturing tree," Nitro is similarly trying to use contorted constructions to bolster its invalidity positions. There is no definition of either term in the respective specifications. Industry definitions and treatises confirm that the ordinary and customary meaning of fracturing manifold in the art is "a series of pipes, connections, and valves that direct fracturing fluid from a fracturing fluid supply to individual wells." They also confirm that the ordinary and customary meaning of fracturing tree is "a specific type of Christmas tree installed specifically for the fracturing process," which differentiates it from ordinary Christmas trees, like production trees.

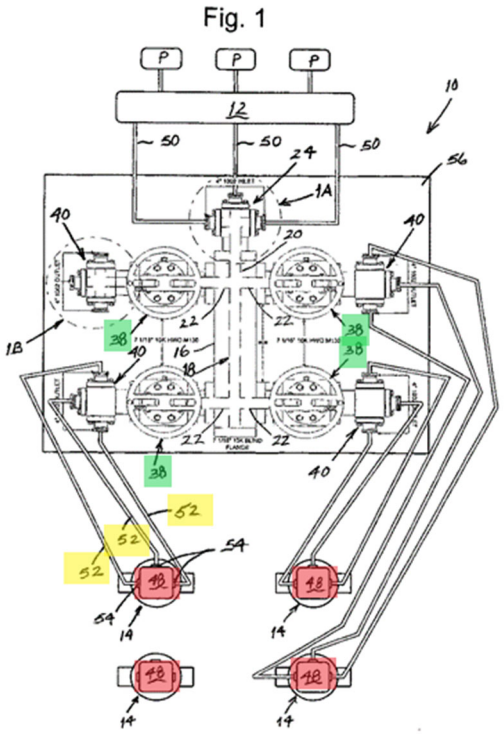
Nitro nonetheless contends that the fracturing manifold of the invention is atypical and does not include valves, and that a fracturing tree of the invention is simply a valve at the wellhead. Nitro does so in an attempt to read ill-fitting prior art onto the claims, including other types of manifolds (like centralized distribution manifolds that bring fluids to worksites), and fracturing systems that use different types of trees (like production trees with tree savers). There are no disclosures in the intrinsic record that support Nitro's positions, and accordingly the Court should instead apply the ordinary and customary meanings in the art, as Cameron proposes.

II. BACKGROUND AND ASSERTED PATENTS

As Dr. Wooley explains more thoroughly in his declaration, hydraulic fracturing is a method of stimulating the production of oil and gas from a reservoir that involves pumping fluids downhole at high pressures and flow rates to fracture the oil and gas containing formations. *See* Ex. A, ¶¶ 27–32. This dispute concerns three components of modern fracturing: fracturing manifolds, fracturing trees, and the fluid conduits that connect them.

A. Fracturing Manifolds

A fracturing manifold is a series of pipes, connections, and valves that directs fracturing fluid from the fracturing fluid supply toward the individual wells. *Id.* ¶ 33; Ex. C (defining "frac manifold" as "[a] system of frac valves that directs treatment fluid from the missile to multiple frac trees"); *see also* Ex. D (defining "manifold" accordingly). The illustration at left shows how fracturing manifolds can simplify fracturing multiple wells by allowing operators to make connections 52 (yellow highlighted number) to each well 48 (red highlighted number) in advance. Ex. A ¶¶ 34–36; Ex. E, [0019], [0021] (noting valves 38 (green highlighted number) control flow into the high pressure lines 52 so that "a single valve 38 is capable of controlling the entire pumping and isolation functions for one well 14").



The operator can then redirect the flow of fracturing fluid to a particular well by opening a corresponding valve 38. Ex. A ¶¶ 34–36; Ex. E, [0019], [0021]. But as explained below, connections 52 between a prior-art fracturing manifold's outlet and its respective well are complex

and expensive, and the high pressures inherent to hydraulic fracturing may require upgraded equipment at the wellhead. Ex. A, ¶¶ 45–50.

B. Fracturing Trees

One such piece of upgraded wellhead equipment is a fracturing tree. Fracturing trees are a specific type of Christmas tree installed specifically for the fracturing process. Ex. A, ¶¶ 49–50; Ex. J. A Christmas tree is "[a]n assembly of valves, spools, pressure gauges, and chokes fitting to the wellhead of a completed well to control production." Ex. G; Ex. A, ¶¶ 42–44; Ex. F, CMRN000961. An operator installs the Christmas tree on top of a wellhead assembly, which also includes valves and adapters. Ex. A, ¶¶ 42–43; Ex. F, CMRN000960. Although there are various types of Christmas trees designed for specific uses (Ex. F, CMRN000961), the components of typical Christmas trees have production pressure ratings. Ex. A, ¶¶ 44–50; Ex. I; Ex. D.

As this suggests, using typical Christmas trees for much higher pressure operations like fracturing may lead to costly and dangerous failures. Ex. A, ¶¶ 44–50. Operators can avoid these costly and dangerous failures by using isolation equipment when a typical Christmas tree is in place during a fracturing operation. Ex. A, ¶ 47. Tree savers, for instance, are isolation equipment that can protect the Christmas tree and the wellhead from the high fracturing pressures and abrasive fracturing materials. Ex. H, CMRN000521; Ex. A, ¶ 47.

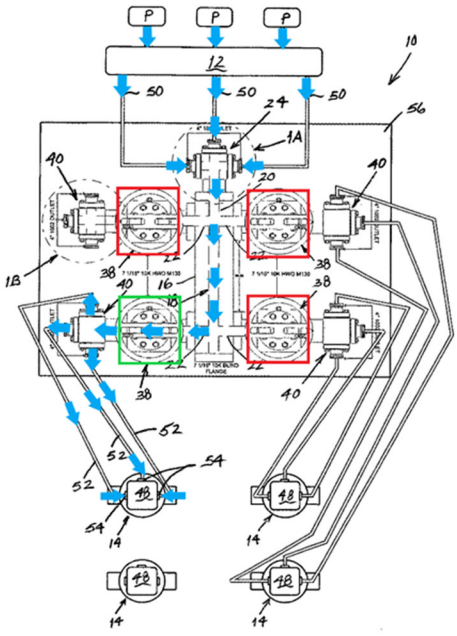
Alternatively, an operator can replace the standard Christmas tree with a fracturing tree. Ex. A, ¶¶ 48–50; Ex. J. Although fracturing trees may look similar to typical Christmas trees, and share many components, "[f]rac trees generally have larger bores and higher pressure ratings than production trees to accommodate the high flow rates and pressures necessary for hydraulic fracturing." Ex. J; Ex. A, ¶¶ 48–50. To provide for these higher pressure ratings and flow rates, fracturing trees comprise heavier-duty materials and valves than typical Christmas trees. Ex, A, ¶ 49. These upgrades make fracturing trees more expensive, heavier, and bulkier. *Id.*

C. Fluid Conduits

Connecting the fracturing tree to the fracturing manifold can be complex. *Id.*, ¶¶ 37–41. As explained above, the fracturing tree is large and heavy, and is in a fixed position above the wellbore. *Id.* The fracturing manifold, likewise comprising heavy-duty pipes and valves that can withstand the pressures and abrasive materials inherent to fracturing, is also large and heavy. *Id.* And it is in a fixed position to best accommodate bringing fluid to multiple wells from the various mixers and pumps. *Id.* Because of this, the outlets of fracturing manifolds and the inlets of fracturing trees generally do not align, vertically or horizontally. *Id.* Connecting fracturing manifolds to fracturing trees thus usually requires installing fluid conduits that can change direction between the respective outlets and inlets. *Id.*

1. Prior-art frac iron—multiple fluid pathways

The prior art solved this problem of making the vertical and horizontal changes necessary to connect the fracturing manifold to the fracturing tree (while also providing sufficient flow rate and pressure) by using multiple pieces of smaller-diameter fluid conduits called "frac iron," or "treating iron." *Id.*, ¶ 37; Ex. H, CMRN000521–000523. Crosses or tees at the outlet of prior-art fracturing manifolds may provide outlets for connecting multiple pieces of frac iron. Ex. E, Fig. 1, [0019]; Ex. A, ¶ 37. To provide inlets for multiple pieces of frac iron, a fracturing tree includes a flow cross, commonly called a "frac head." Ex. A, ¶ 51; Ex. K; Ex. J. Frac heads include multiple inlets for connecting frac iron to the fracturing tree. Ex. A, ¶ 51.



The figure at right shows how frac iron lines running between the flow cross at the fracturing

manifold and the frac head at the fracturing tree provide multiple fluid pathways between the fracturing manifold and the fracturing tree. Ex. E, Fig. 1 (annotated); Ex. A, ¶¶ 33–36. With the valves 38 (outlined red) closed, and the valve 38 (outlined green) open, the fracturing fluid will flow (blue arrows) through the outlet cross 40 at the fracturing manifold, through high pressure lines 52 (the frac iron), and into inlet connections 54 on the frac head at frac tree 48. Ex. E, [0019], [0021]; Ex. A, ¶¶ 33–36, 51. As this figure reflects, each high-pressure line 52 thus represents a separate fluid pathway between the fracturing manifold and frac tree 48. Ex. A, ¶¶ 33–35.

To facilitate the horizontal and vertical adjustments necessary to align frac iron along the ground from the fracturing manifold and up to the frac head inlets (generally at or near the top of the fracturing tree), multiple segments of frac iron connect using hammer unions. Ex. A, ¶¶ 39–41. Each of the dozens of hammer unions between a frac manifold's outlet and the corresponding inlet at a fracturing tree represents a potential point of failure because of the high pressures. *Id.* These connections are often the source of simultaneous leaks. *Id.*

Even properly installed frac iron increases the risk of worksite injuries and leaks. *Id.* Crisscrossing frac iron creates a hazardous "spaghetti plate" at the wellsite. *Id.* This requires the use of tie-downs to decrease vibrations in, and movement of, the frac iron. *Id.* And using multiple, smaller-diameter fluid conduits during high-pressure fracturing operations increases the likelihood of leaks, while also creating bottlenecks in the flow path. *Id.* For these reasons, workers have coined the derisive term "fractapus" to describe the jumble of frac iron running to the frac head atop a fracturing tree in a traditional fracturing operation. *Id.*

2. Cameron's single fluid conduit—one and only one fluid pathway

Some inventions in U.S. Patent Nos. 9,915,132 (ECF No. 1-1) (the "'132 Patent") and 10,385,645 (ECF No. 1-2) (the "'645 Patent") (collectively, the "Asserted Patents") solve the above problems by, among other things, simplifying the connections to fracturing trees.

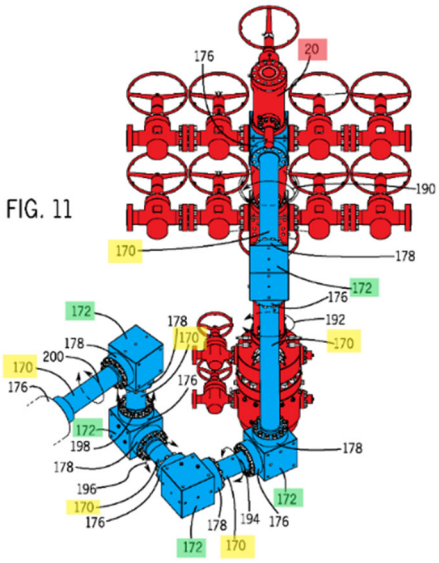
a. ’132 Patent

The ’132 Patent teaches methods and systems to “accommodate spacing and elevation differences” when connecting fracturing trees. *See, e.g.*, ECF No. 1-1 at Abstract; Ex. A, ¶ 53. In some embodiments, the ’132 Patent discloses a single fluid conduit to the fracturing tree comprising connection blocks 42 connecting lengths of conduit (*e.g.*, pipe sections) together to accommodate for these differences in space and elevation. *See* ECF No. 1-1 at 5:62–6:3.

Asserted Claims 9 and 12 describe such embodiments. Claim 9 requires “a single fluid conduit coupled to the well fracturing tree,” where “the single fluid conduit includes . . . a first connection block positioned at the well fracturing tree” and “a second connection block,” with “one or more pipe sections coupled between the first connection block and the second connection block.” *Id.* Although some dependent claims (*e.g.*, Claim 11) require adding adjustment joints, the embodiment in Claim 9 is broader, and provides for vertical and horizontal adjustments of the fluid conduit by using individual lengths of pipe through the connection blocks. *Id.*; Ex. A, ¶ 54.

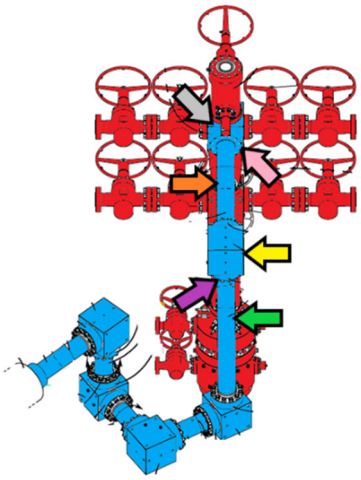
b. ’645 Patent

The ’645 Patent similarly teaches, among other things, systems and methods for providing a single rigid fluid pathway between a fracturing manifold and a fracturing tree instead of prior-art frac iron. *See, e.g.*, ECF No. 1-2 at 9:25–28; Ex. A, ¶¶ 56–64. Annotated Figure 11 at left reflects one such embodiment. *Id.*; ECF No. 1-2 at 8:49–57, 9:9–38. The fluid conduit in this embodiment comprises several pipes 170 (yellow highlighted numbering) that connect to each other through connection blocks 172 (green highlighted numbering). ’645 Patent at 8:49–57. Claim 1 requires a fracturing manifold, a plurality of fracturing trees (*e.g.*,



element 20 (red)), and a plurality of fluid conduits (*e.g.*, the blue-shaded element).

The plurality of fluid conduits couples the fracturing manifold to the fracturing trees. *Id.* An individual fluid conduit to a fracturing tree can comprise one or more rigid components in series (as with the six pipes 170 and five connection blocks 172 in Figure 11). *Id.* But Claim 1 requires that there be ultimately "one and only one rigid fluid pathway from the fracturing manifold to the fracturing tree," like the shaded blue fluid conduit from Figure 11. *See id*. In other words, claim 1 excludes solutions like multiple pieces of prior-art frac iron that would provide multiple rigid fluid pathways between the fracturing manifold and the fracturing tree. Ex. A, ¶¶ 57–63.



Claim 1 further requires that the rigid fluid pathway include pipe joints (*e.g.*, pipes 170 in the Figure 11 embodiment) and connection blocks. ECF No. 1-2 at Claim 1. Although some unasserted dependent claims (*e.g.*, Claims 5–6) require adjustment joints, claim 1 does not. *Id.* Claim 1 does require a specific arrangement of pipes and connection blocks, as in the annotated Figure 11 at right. Ex. A, ¶¶ 60–61. In this exemplary embodiment, claim 1 encompasses "a first pipe [green arrow] that is attached to a first connection block [yellow arrow] via a first flanged connection [purple arrow]." '645 Patent at Claim 1. It further comprises "a second pipe [orange arrow] that is in fluid communication with the first pipe and is attached to a second connection block [silver arrow] via a second flanged connection [pink arrow]." *Id.*

* * * * *

The advantages of the Asserted Patents are evident from comparing Cameron's commercial embodiment, MONOLINE™ (below, left), with a fracturing job using frac iron (below, right). *Id.*

III. LEGAL STANDARDS

A. The Court Should Give Terms Their Plain and Ordinary Meanings Unless the Patentee Set Forth a Clear Definition or Made a Clear Disavowal of Claim Scope.

Although this Court has explained the claim construction standards well in other cases, Nitro's proposals run counter and warrant repeating some principles. To begin, the Court should not construe terms (like "fracturing operation" or "fluid conduit") that a POSITA would understand without a construction. Courts must instead generally give claim terms their plain and ordinary meanings. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc). The only two exceptions to this rule arise when the patentee provides a clear definition of a term or makes a clear and unmistakable disavowal of claim scope. *See id.*

B. The Court Should Not Limit the Claims to Preferred Embodiments nor Read Limitations into Independent Claims from Dependent Claims.

The Court should not read limitations into the claims from preferred embodiments in the specification. "[A]lthough the specification often describes very specific embodiments of the invention, [the Federal Circuit has] repeatedly warned against confining the claims to those embodiments." 415 F.3d at 1323. It has also "rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that

embodiment." *Id.* In other words, "[i]t is well established that claims are not limited to preferred embodiments, unless the specification clearly indicates otherwise." *WesternGeco LLC v. ION Geophysical Corp.*, 889 F.3d 1308, 1323–24 (Fed. Cir. 2018). Additionally, added limitations in dependent claims should not be read into independent claims absent a clear disclosure otherwise. *See, e.g.*, *Myco Indus., Inc. v. BlephEx, LLC*, 955 F.3d 1, 14 (Fed. Cir. 2020).

C. Nitro Has the Burden to Show Indefiniteness by Clear and Convincing Evidence.

Because indefiniteness attacks the validity of a patent, Nitro has the burden to show indefiniteness by clear and convincing evidence. *Sonix Tech. Co., Ltd. v. Publ'ns Int'l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017). Definiteness, or overcoming an indefiniteness challenge, does not demand absolute precision, only reasonable certainty. *See Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014) (interpreting 35 U.S.C. § 112(b)). Nitro thus has the heavy burden to show that the "claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Id*. Nitro cannot meet this burden for terms describing concepts that a POSITA would be familiar with from experience and education in the art. *See, e.g.*, *Ethicon Endo-Surgery, Inc. v. Covidien, Inc.*, 796 F.3d 1312, 1318 (Fed. Cir. 2015) (reversing indefiniteness finding when a POSITA would understand the meaning from "basic concepts of physics and mathematics").

IV. CLAIM TERMS

A. '132 Patent

1. "fracturing tree" / "fracturing trees"

Claims 9, 12	
Cameron's Proposed Construction	Nitro's Proposed Construction
ordinary and customary meaning in the art, which is: "a specific type of Christmas tree installed specifically for the fracturing process"	"a wellhead assembly having at least one valve that can control the flow of fluid during a fracturing operation"

The Court should give the term "fracturing tree" its ordinary and customary meaning in the art: "a specific type of Christmas tree installed specifically for the fracturing process." There is no indication in the '132 Patent that the patentee meant to ascribe a meaning to this term other than its plain and ordinary meaning in the industry. Yet Nitro tries to construe fracturing tree as a wellhead assembly, which is a distinct assembly that does not require a tree at all.[2]

Claim 9 describes the "well fracturing tree" as part of a 'fracturing system" and explains that "fracturing fluid is delivered to the well fracturing tree." ECF No. 1-1. The specification discloses that a fracturing tree may couple to a fracturing manifold and is ***on the wellhead*** to provide fracturing fluid to the well. *See, e.g.*, ECF No. 1-1 at 1:43–54, 1:65–67, 4:28–38. In other words, a fracturing tree is a separate piece of equipment on the wellhead.

Because the intrinsic record does not provide any special definition of "fracturing tree," the court may refer to industry definitions and treatises "to inform its understanding of the 'ordinary and customary' meaning." *Aristocrat Techs. Australia Pty Ltd. v. Int'l Game Tech.*, 709

[2] If Nitro's proposed construction instead read "a ***tree*** having at least one valve that can control the flow of ***fracturing*** fluid during a fracturing operation," Cameron would be agreeable to this alternative construction.

F.3d 1348, 1358 (Fed. Cir. 2013); *Phillips*, 415 F.3d at 1322–23. Industry publications differentiate fracturing trees from other oilfield trees, and from wellheads. The publications confirm that typical oilfield trees, called Christmas trees, are rated for production pressures, not fracturing pressures. For instance, industry publications define a "Christmas tree" as "the control valves, pressure gauges and chokes assembled at the top of a well ***to control the flow of oil and gas*** after the well has been drilled." Ex. I at CAMN001905 (emphasis added); Ex. L at CAMN002309; Ex. D at CAMN002063; Ex. F. at CAMN002630. Industry treatises confirm that fracturing through a standard Christmas tree requires intervening equipment, like "tree savers" that "can protect a Christmas tree at the wellhead from damage and the possible failure that results from exposure to high pressure, corrosive fluids or abrasive proppant-laden fluids." *See* Ex. H at CAMN001958.

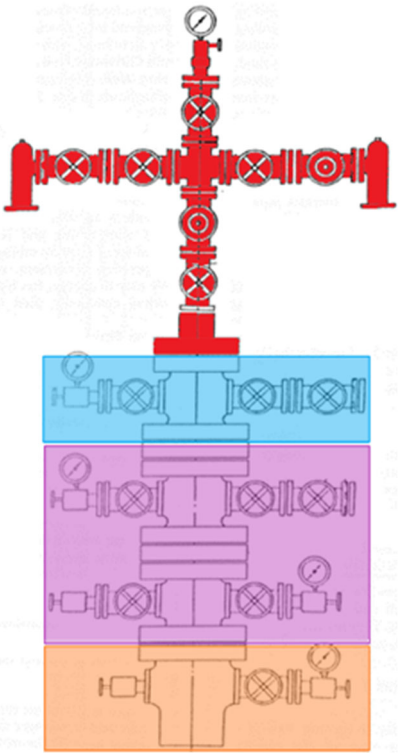
By contrast, a "fracturing tree" is defined as "[a] Christmas tree installed specifically for the fracturing process." Ex. J. A fracturing tree is "one that has a higher pressuring rating" than a standard Christmas tree such that it can withstand fracturing pressures without intervening isolation equipment, like a tree saver. *See* Ex. H at CAMN001958. This is how Dr. Wooley confirms a POSITA would understand the term (Ex. A at ¶¶ 42–51), and how Nitro and its expert, John Ely, have previously described the term "fracturing tree." *See* Ex. M at CAMN000486 ("A fracturing or frac tree is a specific type of Christmas tree installed specifically for the fracturing process." (Nitro));[3] Ex. N at CAMN000599–0600 ("This term has a generally accepted meaning in the field. Specifically, a fracturing tree, also called a frac tree or a frac stack, is a specific type of 'Christmas tree' which is installed to facilitate a fracturing job. . . . Generally the frac tree will

[3] Although the IPR dealt with a different patent with distinct claims, Nitro's statements about the plain and ordinary meaning of certain terms are notable because they differ from its positions here.

be removed and replaced by a standard Christmas tree for production." (Ely)).[4]

Nitro's construction of "fracturing tree" has changed because it needs its newly proposed (and incorrect) construction to fit its prior art, some of which disclose the use of production trees during fracturing operations. But its new construction does not fit with a POSITA's understanding, and effectively reads the term "tree" completely out of the construction.

This is evident from the colorized figure of a Christmas tree and wellhead assembly at right from an industry textbook. *See* Ex. F at CAMRN002629. The "tree" (red) is a specific component on the wellhead assembly. *See* Ex. F at CAMN002628. Below the tree, the wellhead assembly also includes various valves that control the flow of fluid to and from the well. *See id.* at CAMN002629; Ex A ¶¶ 42–51. This includes in the tubinghead spool assembly (blue), the casinghead spool assembly (purple), and the casinghead seat assembly (orange). *See id*. at CAMN002628–630; Ex. A ¶¶ 42–51. The same industry textbook also confirms that "[d]ifferent Christmas trees have different uses including oil production . . . and fracturing and acidizing." *See* Ex. F at CAMN002630; Ex. J; Ex. A, ¶¶ 42–51.



Nitro's new proposal to construe fracturing tree as merely a valve at the wellhead is

[4] The PTAB ultimately did not construe the term "fracturing tree." But it did "determine that a fracturing tree is a tree used to facilitate a fracturing process, and does not require a tree of a particular size or weight or a tree that is temporarily installed only for the fracturing process." Ex. T at 20. Cameron does not contend the term "fracturing tree" includes limitations about particular sizes or weights. Cameron simply seeks to clarify that fracturing trees are a specific type of Christmas tree and are not typical production trees.

incorrect and would obviate the requirement of a "tree." Nitro's proposal would also improperly broaden "fracturing tree" to encompass all Christmas trees and, even more broadly, all wellheads. The Court should thus construe "fracturing tree" to have its ordinary and customary meaning: "a specific type of Christmas tree installed specifically for the fracturing process."

2. "fracturing operation"

Claim 9	
Cameron's Proposed Construction	Nitro's Proposed Construction
plain and ordinary meaning	"an act of injecting fluid into a well to create man-made fractures in a hydrocarbon bearing formation"

The Court should apply the plain and ordinary meaning to the term "fracturing operation." There is no special definition in the intrinsic record, and a POSITA, having substantial experience with fracturing operations, would not need one. *See* Ex. A, ¶¶ 74–78; Ex. N at CAMN000596 (Nitro's expert opining that a POSITA "would have a minimum of three years of experience" with fracturing). A POSITA would be familiar with entire textbooks devoted to fracturing (*see, e.g.*, Ex. H at CAMN001949–961; Ex. O at CAMN001964–969) and would understand that "fracturing operations" generally refers to hydraulic fracturing. *See, e.g.*, Ex. P (defining "hydraulic fracturing"); Ex. D at CAMN002124 (defining "fracturing"). The Court need not construe this term. *See Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010) (finding no error when a district court rejected defendant's proposed construction and adopted plain and ordinary meaning). This term should be accorded its plain and well-known ordinary meaning.

3. "fluid conduit"

Claim 9	
Cameron's Proposed Construction	Nitro's Proposed Construction
plain and ordinary meaning	"channel for conveying fluid, comprising an adjustment joint or pivot joint"

The Court should also apply the plain and ordinary meaning to the simple term "fluid conduit." Claim 9 describes it as an element through which "fracturing fluid is delivered to the well fracturing tree." ECF No. 1-1. There is no alternative definition or disavowal of claim scope in the intrinsic record. This use in the claims tracks industry definitions that describe a conduit as a "channel through which fluid flows." Ex. I at CAMN001906 (defining "conduit"), CAMN002121 (defining "fluid flow"); Ex. L at CAMN002310 (defining "conduit"). It also accords with Dr. Wooley's understanding of the term. Ex. A, ¶¶ 79–84.

Nitro improperly attempts to add "adjustment joint" and "pivot joint" limitations into this claim term, but the specification makes clear that not all embodiments contain those joints. ECF No. 1-1 at 2:2–3, 3:63–4:4, 4:55–5:3. It is improper to read these limitations into the claims from certain embodiments in the specification when the claims do not require these components. There are multiple embodiments in the specification, but even if adjustment joints and pivot joints were shown in the only embodiment in the patent, Nitro would still be wrong. *See Phillips*, 415 F.3d at 1323. The Court should not create adjustability limitations in the term "fluid conduit."

Claim differentiation also demonstrates that a "fluid conduit" does not include adjustment or pivot joints. Claim 11, which depends from claim 9, adds "at least one adjustment joint" as a claim limitation. When a dependent claim adds a limitation, there is a presumption that the limitation is not present in the independent claim. *Myco Indus.*, 955 F.3d at 14. Nitro's proposal that adds the limitations of dependent claims into an independent claim cannot be correct. The

Court should therefore reject it and apply the plain and ordinary meaning.

4. "a first connection block positioned at the well fracturing tree"

Claim 9	
Cameron's Proposed Construction	Nitro's Proposed Construction
plain and ordinary meaning	Indefinite

Claim 9 requires "a first connection block ***positioned at*** the well fracturing tree." '132 Patent at Claim 9 (emphasis added). This claim requires that "fracturing fluid can be routed . . . to the well fracturing tree through the first connection block." A POSITA would understand this to mean that the first connection block is attached to the fracturing tree (*e.g.*, as part of the stack of valves comprising the fracturing tree), or adjacent to the fracturing tree (*e.g.*, attached to the fracturing tree by a valve), to facilitate the flow of fracturing fluid into the wellbore. *See* Ex. A, ¶¶ 85–90. This fits with dependent Claim 10, which requires that the connection block be "attached to a valve of the well fracturing tree."

Nitro is wrong that this term is indefinite. A POSITA with the requisite education and experience would understand with reasonable certainty what it means to position something at a fracturing tree. For instance, a POSITA would be familiar with positioning frac heads, valves, and conduits at the fracturing tree. *See* Ex. A, ¶¶ 85–90; Ex. J; Ex. K. Terms like this that a POSITA would understand based on their education and experience are not indefinite. *See, e.g.*, *Ethicon*, 796 F.3d at 1318. The Court should therefore find this term not indefinite and should apply its plain and ordinary meaning.

5. "connection block"

Claim 9	
Cameron's Proposed Construction	Nitro's Proposed Construction
plain and ordinary meaning	"a rigid connector capable of changing the direction of flow therethrough and having at least two openings"

The Court should construe the term "connection block" to have its plain and ordinary meaning. The term "connection block" describes a component that connects pipes or other elements together, without stating "rigidity"[5] or requiring "changing the direction of flow." This broad and common use is evident from the claims, and in the art. For instance, Nitro's president, Bobby Koricanek, uses this term fifty times in his own patent application without providing any special definition. *See* Ex. Q. The '132 patent likewise never defines the term because a definition is not needed. As a result, the Court should apply its plain and ordinary meaning without imposing the artificial limitations that Nitro proposes in its construction.

[5] Notably, other asserted claims in the '645 patent specifically include a "rigid" limitation. *See, e.g.*, ECF No. 1-2 at claim 1 (requiring "at least one ***rigid*** fluid conduit" and "one ***rigid*** fluid pathway" (emphasis added)) This indicates when the patentee wanted to use the term and limit elements to being "rigid" it knew how to do so. It chose not to do so with this term.

B. ’645 Patent

1. “fracturing manifold / fracturing fluid distribution manifold”

Claims 1–4, 10, 13, 17–18, 20	
Cameron’s Proposed Construction	Nitro’s Proposed Construction
ordinary and customary meaning in the art, which is: “a series of pipes, connections, and valves that direct fracturing fluid from a fracturing fluid supply to individual wells”	“a pipe or chamber with multiple outlets for delivering fracturing fluid to a well”

The Court should apply the plain and ordinary meaning of the term “fracturing manifold.” There is no definition in the intrinsic record, so the Court may consult industry dictionaries to better understand the term. *See Phillips*, 415 F.3d at 1322–23. Industry definitions describe a fracturing manifold as a series of pipes, connections, and valves that direct fracturing fluid from a fracturing fluid supply to individual wells. *See* Ex. J (defining “frac manifold”); Ex. D at CAMN002171 (defining “manifold”). Dr. Wooley confirms that this is how a POSITA would understand the term from the POSITA’s experience and education. Ex. A, ¶¶ 96–101.

Nitro, however, seeks a construction that would broaden “fracturing manifold” to include any pipe or chamber with multiple outlets. This ignores that a POSITA would understand a typical fracturing manifold to include valves and piping that collectively direct the flow of fluid to individual wells. See Ex. A, ¶¶ 96–101; Ex. D at CAMN002171; Ex. J. As with the term “fracturing tree,” Nitro has picked this incorrect construction in hopes that it will help when applying otherwise ill-fitting prior art disclosing other types of manifolds that lack valves. Nitro’s position was rejected by the PTAB when it considered a different patent also claiming a fracturing manifold. Ex. T at 17 (“For all the foregoing reasons, we maintain our preliminary construction of a fracturing manifold as ‘a flow path for the distribution of fracturing fluid from a source of fracturing fluid to one or more fracturing trees that includes at least one valve.’”).

Moreover, nothing in the intrinsic record supports Nitro's proposed construction. The specification notes that "the fracturing manifold 22 includes at least one valve that controls flow of fracturing fluid to the fracturing tree 20." ECF No. 1-2 at 3:48–51. The figures likewise show valves in the fracturing manifold's outlet branches. *See id.* at Figs. 3, 10. And the figures only show a portion of the trunk line, which may include additional valves in its unshown portions. In sum, there is no indication that the patentee used the term "fracturing manifold" inconsistently with its ordinary and customary meaning in the art.

The Court should reject Nitro's proposal and construe this term to have its ordinary and customary meaning in the art, which is "a series of pipes, connections, and valves that direct fracturing fluid from a fracturing fluid supply to individual wells."

2. "fracturing tree" / "fracturing trees"

Claim 1–4, 13, 17, 20	
Cameron's Proposed Construction	Nitro's Proposed Construction
ordinary and customary meaning in the art, which is: "a specific type of Christmas tree installed specifically for the fracturing process"	"a wellhead assembly having at least one valve that can control the flow of fluid during a fracturing operation"

As with the '132 patent, the '645 patent does not include a clear definition of the term "fracturing tree," or any clear disavowal of claim scope. The Court should therefore give this term its plain and ordinary meaning for the same reasons as in Section IV.A.1, *supra*.

3. "rigid fluid pathway"

Claim 1, 10, 14, 20	
Cameron's Proposed Construction	Butch's Proposed Construction
plain and ordinary meaning	"[rigid (i.e., inflexible)] route for fluid flow that comprises an adjustment joint or swivel joint"

The Court should give the term "rigid fluid pathway" its plain and ordinary meaning. There

is no clear definition or clear disavowal of claim scope that supports Nitro's construction requiring an adjustment joint or a swivel joint. The specification is clear that "adjacent pipes 170 and connection blocks 172 could be rotated to desired positions before assembling these components together (e.g., via a studded connection)," and thus can be positioned as desired without adjustment joints or swivel joints. ECF No. 1-2 at 8:40–43. The specification also explains that adjustable elements, like swivel components, may be present in "***some*** embodiments." *Id.* at 8:43–48 (emphasis added).

The language of dependent, nonasserted claims further confirms that adjustment joints and swivel joints are not required in a "rigid fluid pathway." For instance, claims 6 and 9 (both depending from claim 1) add "an adjustment joint" and "a swivel" to the claimed system, respectively. ECF No. 1-2. Again, these added limitations cannot properly be read into "rigid fluid pathway" under the doctrine of claim differentiation. *Myco Indus.,* 955 F.3d at 14. The Court should thus reject Nitro's proposal and afford this term its plain and ordinary meaning.

V. CONCLUSION

The Court therefore should find "a first connection block positioned at the well fracturing tree" not indefinite, should reject Nitro's improper limiting constructions, and should apply the plain and ordinary meaning to all the terms in accord with Cameron's proposals.

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Respectfully submitted,

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